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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BHATTACHARYA, SAM	

ART UNIT	PAPER NUMBER
2685	3

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/021,541	SMOLYAR ET AL.	
	Examiner	Art Unit	
	Sam Bhattacharya	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-25 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6, 7, 9-14,16-19 and 21-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Miya et al. (US Patent Application Publication No. 2002/0191582 A1).

Regarding claims 1 and 9-12, Miya et al. disclose a communication apparatus that is part of a CDMA system, the communication apparatus including a channel estimator 2023 to estimate channel parameters for a communication channel based on a signal received from the communication channel, and a quality measure target generator (elements 110 and 111) to generate a quality measure target value for the communication apparatus using channel parameters estimated by said channel estimator, said quality measure target value representing a desired value for a quality measure associated with the communication apparatus. See FIGS. 4 and 5, paragraphs **[0040]**, **[0042]**, **[0043]** and **[0049]**.

Regarding claims 2 and 16, Miya et al. disclose that the quality measure target generator generates an SIR target value. See paragraph **[0049]**.

Regarding claims 3 and 13, Miya et al. disclose that the quality measure target generator includes a quality measure target estimator 110 to determine an estimated quality measure target value using channel parameters estimated by said channel estimator and a quality measure target

correction unit 111 to correct said estimated quality measure target value based on performance information.

Regarding claims 4 and 14, Miya et al. disclose that the performance information includes BLER information. See paragraph **[0049]**.

Regarding claims 6 and 7, Miya et al. disclose a quality measure estimator 104 to estimate an actual quality measure value for a signal received from the communication channel, and a message generator 106 to generate a power control message based on the estimated quality measure value and quality measure target value. See paragraphs **[0043]** - **[0045]**.

Regarding claim 17, Miya et al. disclose a performance estimator 109 to estimate a performance parameter of the communication apparatus. See paragraphs **[0043]** and **[0049]**.

Regarding claim 18, Miya et al. disclose that the performance estimator estimates a receive error rate of the communication apparatus and the quality measure target generator uses the receive error rate to generate the quality measure target value. See FIG. 4.

Claim 19 incorporates the limitations of claims 3 and 17, and is therefore rejected for the same reasons as claims 3 and 17.

Claim 21 incorporates the limitations of claims 6, 7 and 17, and is therefore rejected for the same reasons as claims 6, 7 and 17.

Regarding claims 22 and 24, Miya et al. disclose a communication system that includes a first quality measure target generator to generate a first quality measure target value for a first remote base station BTS1 using estimated channel parameters for a communication channel between said mobile communicator MS and the first remote base station, a second quality measure target generator to generate a second quality measure target value for a second remote

base station BTS2 using estimated channel parameters for a communication channel between mobile communicator and the second remote base station, and a site selection manager RNC to select a remote base station, during handover, to act as a servicing base station for the mobile communicator using at least the first quality measure target value and said second quality measure target value. Moreover, it is inherent to the system of Miya et al. to include more than two remote base stations having quality measure target generators, since cellular coverage typically requires several base stations and two base stations are shown in Miya et al. merely for illustrative purposes. See FIGS. 7 and 8, and paragraphs **[0062]** – **[0066]**.

Regarding claim 23, Miya et al. disclose that the first and second quality measure target generators include SIR target generators. See paragraph **[0066]**.

Regarding claim 25, Miya et al. disclose a message generator to generate a power control message for a remote base station based on a corresponding quality measure target value. See paragraph **[0064]**.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 5, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miya et al. in view of Leung (US 6,452,917).

Regarding claims 5 and 15, Miya et al. fail to disclose estimating channel parameters using symbol energy variance information.

However, Leung discloses a CDMA communication system in which a channel estimator 310 uses variations in symbol energy to make channel estimates. See FIG. 3 and col. 5, lines 35-51. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the communication apparatus of Miya et al. by estimating channel parameters based on a variation in symbol energy as taught by Leung to make a more accurate assessment of channel conditions based on channel statistics as they vary with rapid changes.

Claim 20 incorporates the limitations of claims 15 and 17, and is therefore rejected for the same reasons as claims 15 and 17.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miya et al. in view of Almgren et al. (WO 01/20808 A2).

Regarding claim 8, Miya et al. fail to disclose a communication apparatus including a channel estimator and a quality measure target generator, wherein the communication apparatus is a handheld communicator.

However, Almgren et al. disclose a channel estimator and a quality measure target generator (elements 30 and 40) in a mobile station that is a handheld cellular communicator. Moreover, Almgren et al. states that the apparatus can be implemented in a base station or a mobile station. See FIG. 1, page 5, lines 19-20 and page 6, line 8 – page 7, line 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the elements of the communication apparatus of Miya et al. by implementing them in a handheld communicator as taught by Almgren et al. to provide an improved power control method using quality indicators and a target value to the handheld communicator.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takano et al. (US Patent Application Publication No. 2002/0061731) disclose a mobile communication control method in which handover is based on comparing a reception SIR to a target SIR at a mobile station.

Kanemoto et al. (US Patent Application Publication No. 2002/0060721) disclose a radio apparatus that selects a spreading code based on a comparison of target SIR threshold values.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Bhattacharya whose telephone number is (703) 605-1171. The examiner can normally be reached on 8:30 a.m. to 5:00 p.m., Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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